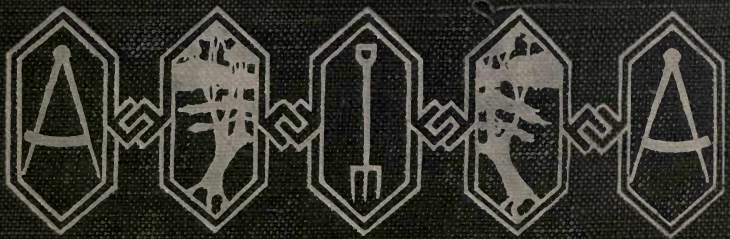
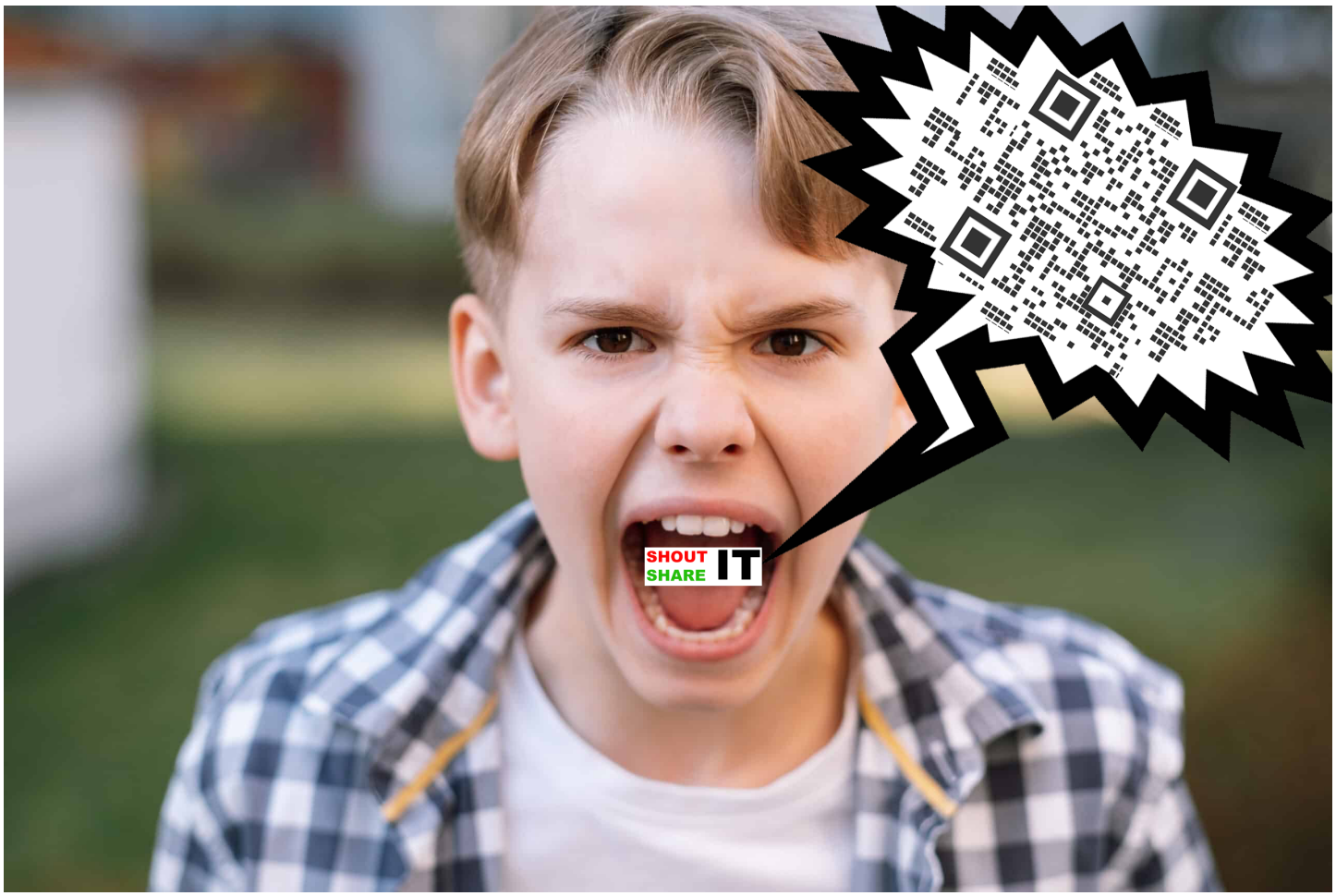
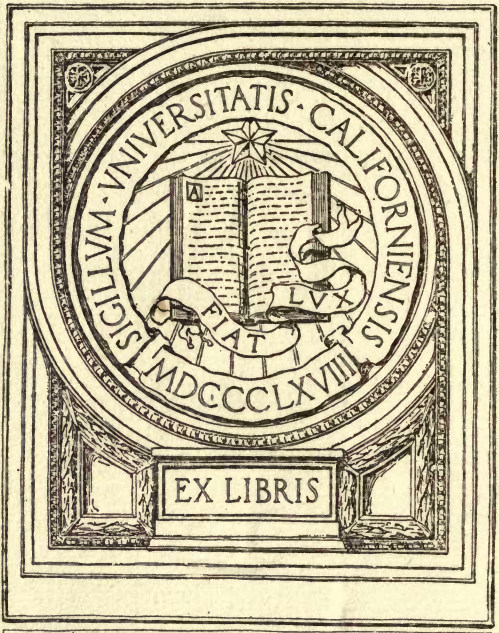
UC-NRLF
$B 278 496

MAKING A GARDEN OF PERENNIALS

W. C. EGAN




SHOUT
SHARE IT


SIGILLVM · VNIVERSITATIS · CALIFORNIENSIS
LVX
FIAT
MDCCCLXVIII
EX LIBRIS

MAKING A GARDEN OF PERENNIALS

THE HOUSE & GARDEN MAKING BOOKS

IT is the intention of the publishers to make this series of little volumes, of which *Making a Garden of Perennials* is one, a complete library of authoritative and well illustrated handbooks dealing with the activities of the home-maker and amateur gardener. Text, pictures and diagrams will, in each respective book, aim to make perfectly clear the possibility of having, and the means of having, some of the more important features of a modern country or suburban home. Among the titles already issued or planned for early publication are the following: *Making a Rose Garden; Making a Lawn; Making a Tennis Court; Making a Fireplace; Making Paths and Driveways; Making a Rock Garden; Making a Garden with Hotbed and Coldframe; Making Built-in Bookcases, Shelves and Seats; Making a Garden to Bloom This Year; Making a Water Garden; Making a Poultry House; Making the Grounds Attractive with Shrubbery; Making a Naturalized Bulb Garden;* with others to be announced later.

LIBRARY OF
CALIFORNIA

To be really satisfying the flower garden must have that air of permanence that is given it by the perennials

Making a Garden of Perennials

By W. C. EGAN

NEW YORK
McBRIDE, NAST & COMPANY
1912

SB405
E4

Copyright, 1912, by
McBRIDE, NAST & CO.

UNIV. OF
CALIFORNIA

Published June, 1912

CONTENTS

	PAGE
Introduction	1
Preparing the Beds	7
Winter Mulching	20
Summer Mulching	23
Plant Combinations	30
Weeding	34
Lists of Dependable Perennials:	
Of General Excellence	36
For Shady Positions	49
For Dry Soils	50
For Wet Soils	51
Alpines, or Rock Plants	51

250671

THE ILLUSTRATIONS

A Garden of Perennials . *Frontispiece*

FACING PAGE

A Colony of German Iris . . 4

Sweet Rocket Against a Foliage Background 12

Peonies 24

Canterbury Bells and Foxglove . 30

Anemone Japonica 38

Phlox Paniculata 46

Swamp Mallow, Gaillardia and *Campanula Persicifolia* . . 50

MAKING A GARDEN OF PERENNIALS

INTRODUCTION

THE successful garden has a permanent basis. There must be some flowers that appear year after year, whose position is fixed and whose appearance can be counted on. The group classed as perennials occupies this position and about flowers of this class is arranged all the various array of annuals and bulbs. These last act as reinforcements in rounding out the garden scheme.

Perennials are plants that live on year after year if the conditions surrounding them are congenial.

Trees and shrubs are perennials, of course; in these the stems are woody, but we are considering only those known as herbaceous perennials, having stems of a more or less soft texture that, with the exception of a few evergreen species, die

back each fall, new ones appearing the following spring.

Quite a number of them are too tender to be generally grown as hardy perennials, but those that bloom freely the first year —like the snapdragon—are treated as annuals, discarding them when the season is ended.

Some biennials—those that do not bloom until the second year, and then die—may be placed among the perennials and considered of their class, because they seed so freely at the base of the parent plant and bloom the following year, that their presence in the border is nearly always assured. The only thing necessary to do is to transplant those not in the situation you desire them to bloom in. *Rudbeckia triloba,* one of the Black-eyed Susan type, is not only a good example of this class, but a charming plant that all should grow, and, moreover, it is a very accommodating one, doing splendidly in semi-shady places, such as north of buildings or under weep-

ing trees like the rose-flowered Japanese weeping cherry. It is at home in full sunshine where it will form a broadly rounded, bushy plant about three feet in diameter and, when in full bloom, with its myriad of black-eyed flowers, it can dispel the worst case of melancholia a dyspeptic ever enjoyed. It requires a good open, rather light soil to do itself justice. If lifted when in full bloom, put into a ten-inch pot, well soaked at the roots, and set aside for a few hours away from sun and wind, it will last for two weeks as a porch or house plant.

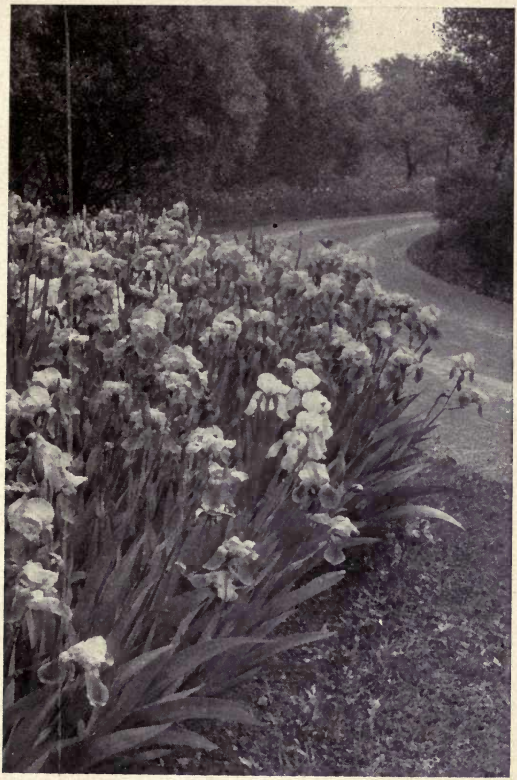
We hear a good deal about the gardens of our grandmothers, perennial gardens, in which the plants outlived the flagstones at the house door.

With a few exceptions, perennials are not long-lived. The gas plant, peonies, some of the iris, day lilies, and a few others, seem permanent.

The usual run require to be taken up about every two or three years and divided.

There are two reasons for this. In the first place, the roots have exhausted all the food within reach and, again, the main crown, from which spring the blooming shoots, dies from exhaustion. At the outer edge of this decay is generally a fringe of "live matter" which, if taken up, separate from the decayed center, divided, and reset in good soil, will rejuvenate itself, and soon form a new plant.

In unfavorable sections the Texas gaillardia will lose its crown during winter, and the anxious novice watches impatiently in the spring for its reappearance, and finally digs it up only to find that while the crown is decayed the roots are alive, and here and there, on these, new plant buds are forming which, if not disturbed, would soon make good plants, probably not placed, however, just where wanted. Nurserymen often avail themselves of this peculiarity and increase their stock by taking up a plant, cutting the roots into small sections, and growing them separately.



The German iris is one of the most beautiful forms in the flower world and it will flourish in practically any moderately good soil

CANCELLED

We must remember that nine-tenths of the plants we grow are exotic—natives of distant parts and climes—coming from various atmospheric conditions, and from all kinds of soil. We bring them into our garden and grow them all under one climatic influence and in the one kind of soil we happen to possess. Certainly we cannot expect uniform success with all of them. You might as well bring into one room unlettered natives of distant climes and expect them all to enter into a general conversation. Even in gardens quite near each other, their permanence varies. I cannot grow, successfully, any of the boltonias, while within a quarter of a mile of me, in a friend's garden, they grow like weeds. Our soil is the same, and one would suppose that the climatic conditions were, still the fact remains. I merely mention this so that any novice finding that he cannot grow some plants as well as others near him, may not feel lonesome in his grief. It is, however, a good plan, when

a plant supposedly easy to grow, fails to materialize, to try it in another part of your own garden, and if it does not do well there, discard and forget it—the world is full of good things.

Due to the fact of the perennial's habit of annual recurrence the cultural directions are different from the flowers of but a season's bloom. There are some vital fundamentals that every gardener should know and some short cuts to success that every one may know. Since perennials, then, form the very kernel of the garden these are things of first importance in the growing of flowers and will be here elaborated sufficiently to give the reader an impetus that will carry him at a bound into the inner circle of the garden mysteries.

Making a Garden of Perennials

PREPARING THE BEDS

DO we want a successful flower bed—one that our neighbors will envy—or one in which the plants are struggling to exist? If we want the former—and who does not?—we must give our plants good pasturage. They are as fond of the fat of the land as we are, and, since they gladden our hearts with their radiant blooms, we should treat them fairly. And how? By giving them a good, deep soil for their root-run, not only rich in food, but loose and friable.

Most all virgin soils contain ample plant food, but the deeper part lacks the result of the action of air, sun and frost, and the natural humus of decayed leaves and grasses. The plant food it contains is

" uncooked "—that is, not ready for plant assimilation. Therefore, the beds to contain your perennials should be dug at least two feet deep—three is better—and good garden soil, or soil from a corn-field or any hoed crop where the weeds have been kept down, used to supplement all but the top layer one foot in depth. All of this applies to tree and shrub holes also. This top layer of one foot in depth is apt to be in fair condition for immediate use and may be applied in the bottom of the bed, mixed with either fresh or rotted manure. The soil brought in may be mixed with old manure and placed on top.

A word about " old manure " is opportune here. Any manure that has been piled up for a year or more in a weed-infested corner and used on your grounds, especially on your lawn, is the best promoter of exercise I know of, and can keep you busy all summer dislodging the weeds that spring from the seed its bosom protected.

Of course, in a few sections where the soil is three feet deep—as I am told it is in the Illinois corn belt—all that is needed is to loosen up the soil to the depth mentioned, and add old manure. If the removal and bringing in of so much new soil is too harsh on the pocketbook we must proceed in a more economical way. If the soil is clayey in texture, mix with it sifted coal ashes or sand, and the coarser part of the ashes may be incorporated with the soil in the lower foot of bed. Remove the top one-foot layer, and set it aside; throw out the bottom soil to the remaining depth. Break it up finely and, in replacing it, besides the coal ashes or sand, add fresh strong manure, placing it in horizontal layers—say three inches of soil, and then a layer of manure four inches thick, when gently tamped down; or make the layers slantingly—say at an angle of about forty-five degrees. This will add humus to the soil, and allow air and moisture to penetrate it. Then put in the original

top layer, mixing it with old manure. No fresh manure should touch the root of a plant. The fresh manure at the bottom of the bed will be well rotted by the time the roots reach it. After the top layer is put on you will find the bed raised up six to eight inches above the lawn, which is all right; it will settle enough in time. At all times break up the soil into fine particles, otherwise a lump of clay will remain a lump, and is of little value for plant use.

In making beds or shrub holes close to buildings having a cellar, one generally has to remove entirely all the soil, as that present usually consists of the deeper soil from the cellar excavation, mixed with bricks and mortar—few flowers root well in brick.

Place your flower beds along the walks, at the house, or along the lot lines, but do not clutter the center of your lawn with them. An open grass plot adds apparent size and dignity to any place. Give as much open sunlight as possible. Only

early spring bloomers, like the hepaticas and trilliums, grow in what we call shade —though at the time of their growth and bloom they have the sunlight through the leafless tree branches. Do not make a bed where the drainage is bad or where water will stand in it during the winter. Tile draining will improve the bed under almost any circumstances.

Keep away from large trees. A vigorous elm, and a perennial cannot eat and drink out of the same dish and both grow fat. The perennial will be the one to suffer, mostly from lack of moisture. If you have planted near a tree or lack of space compels you to do so, take a sharp spade and, each spring, cut deeply all along the edge of the flower bed nearest the tree, and pull out from the bed all the small roots you can without disturbing the plants. This will help it for a time, but the elm will invade the bed again and the operation must be repeated. This applies to beds within eight or ten feet of a

tree. For any bed much nearer, the cutting would be apt to injure the tree, and the growth in the bed would be a poor one.

Where the grounds are large and there is ample room for large beds at the borders, with an open lawn in front, flowering shrubs may be used as a background for perennials, but the growth of the shrubs requires frequent removals of the perennials further forward, and a frequent renewal of the plant food which the shrub is sharing. This method requires more watering on account of the double duty required of the soil.

Avoid fancy or geometrical shapes. They belong, when allowable, to formal gardens where tender bedding plants are used. Along walks, rectangular beds may be made, but against buildings or boundary lines, while the rear line may be comparatively straight, the front should be undulating, having long sweeping bays and promontories. No short curves should exist. They interfere with the lawn-

A background of vines or flowering shrubs is worth striving for, especially to set off white flowers like sweet rocket

mower. When it is desirable to face a boundary border with a walk, then, of course, the front line of a bed should be straight.

Some perennials require to be planted two feet apart, and in some, like peonies, three feet is close enough, for in time their tops will meet. Eighteen inches apart is enough to allow for the majority and some slender ones require but one foot. All this should be taken into consideration when determining the width of the bed.

Starting with the proposition that the average plant requires eighteen inches headroom, and that the first row may be planted six inches within the bed at the front—nine to twelve is better—and the second one back eighteen inches, and six from the back, we find that with rows two plants deep it requires a bed two feet and a half in width. This should be the narrowest allowance you should make. In a four-foot bed you can place them three deep, and one five and a half takes four

plants. In other words, you increase your width in jumps of eighteen inches at a time. While this is not actually necessary, it is best and applies only to the widest and narrowest points. The intervening curved lines will vary from this measurement but it makes no difference, because you do not plant in straight rows from back to front as one would cabbages.

In planting at boundary lines or at buildings, the taller ones should be used at the back, but the semi-tall ones—say three feet in height—should occasionally be brought well toward the front in order to avoid stiffness and to add irregularity to the general effect. If a house or fence is at the back, flowering vines like the *Clematis paniculata*, or *C. flammula*, or any annual flowering vine, may be used here and there. In detached beds which may be seen from all sides, the taller plants are set in the middle.

The effect is much better if you plant in groups of four, six, or more of one kind.

It relieves the effect of spottiness. Plant in an irregular manner so as to avoid stiffness or lumpiness, and let one group run in behind another. If you plant large groups in a pear-shaped form with the narrow stem end slightly curved and let the larger end of the adjoining pear-shaped group run up to the narrow stem of its neighbor, you will produce the effect I suggest. The plants you buy, being small, if planted as suggested will not occupy all the ground the first year. These spaces may be carpeted with annuals for a year or so, or planted with gladioli, lilies or *Hyacinth candicans.*

I will not attempt to discuss the fighting and clashing of colors sometimes seen in plantings. The acknowledged head of the house—she who is probably the one who desires the flower border—is generally an authority on pleasing color combinations.

Securely staking tall-growing plants is necessary if one desires neatness and effectiveness in the garden. We care for

a plant twelve months in the year for the benefit we derive from its short season of bloom, and to allow it, then, to be sprawled upon the ground by passing storms seems cruel. Broom handles and ash rods, half an inch in diameter, used by basket makers, may be obtained from dealers in broom material. Bamboo canes are useful, as well as the painted stakes sold by seed houses. The stakes should be forced well down into the soil. Often, in dry weather when the ground is hard, they are not driven down far enough and the first hard rain softens the soil around them, and, if a strong wind exists, the plant may topple over and carry the stake with it. In tying them don't hug them as you would a long-lost brother; give them some natural freedom. In large groups, place the stakes around them, three or four feet apart, and string from stake to stake, running cross strings through the plants or between them. A single large plant generally requires at least three stakes. Do

it before they are broken down by storms, for once broken it is hard to make a good job of it, especially if left down for some time. Then the growing ends turn up for light and harden in that bent condition.

If you raise the perennials yourself it is best to grow them one year in a reserve bed, say in the vegetable garden, because but very few will bloom the first year from seed. Purchased plants should have blossoms the first year, as they are supposed to be one-year-old seedlings or are divisions of old plants. These may be set out in the first position upon arrival. Seedlings in the reserve bed may be planted in rows, each row a foot apart, and the plants six inches apart in the rows; thus planted, they take up but little room and in the early fall or next spring they may be removed to their permanent quarters.

In transplanting, be sure to expose the roots as little as possible to the sun or drying winds. When plants arrive with

the started foliage looking wilted, sprinkle them overhead and set them in a shady sheltered position for a while—say an hour. This will generally revive them enough to go on with your planting. If you have reason to suppose the plants were frosted in transit, set the box in a cool cellar over night. A gradual thawing out may rejuvenate them, while a sudden thawing is dangerous.

In planting, it often helps an amateur to take a few stakes and place one at each point he desires to set a plant. If you set six or more stakes, plant six or more plants, pulling up the stakes as you proceed to set out more. Make the holes in the bed wide enough to allow the roots to go in without crowding, and after filling in the soil, press it down firmly around the neck of the plant, and over the roots, and water well when all the bed is planted.

When dry, hot weather comes, and you think artificial watering necessary, soak the bed well and then let it alone for some

time, although, in the evening, after a hot sunny day accompanied by a strong, drying wind, if the foliage looks wilted somewhat, a showering overhead is beneficial. The day after a good soaking it is well to go lightly over the bed with a hoe or rake and stir up the soil, breaking the crust produced by the watering. This makes a mulch that will conserve the moisture and protect the roots from the hot sun. Frequent slight waterings keep the moisture at the top and the roots are then inclined to grow upwards to meet it. If you then neglect to water, the soil soon becomes dry and the roots suffer.

WINTER MULCHING

WHEN winter approaches, if you desire tidiness, cut the tops down (except evergreen-foliaged plants) even if the frost has not already done this work for you, and cover the bed with well-rotted manure, but it is really better to allow the tops to remain all winter, especially in the case of hollow-stemmed plants. Well-decayed manure needs but little going over in the spring, requiring only the removal of the foreign material and the straw chaff it may contain. What remains is generally the color of the soil, thus unnoticeable and acts as a mulch during the summer. Fresh manure may be used—in fact it is better, because the plants receive the benefit of the leachings, which is pretty well spent in old manure. In large grounds there is, however, considerable labor attached to the

removal of this fertilizer in the spring, as it must be taken away for neatness' sake. While this manure has the greater part of its strength leached out, it is well worth saving for the humus still in it, and it may be dug in in the vegetable garden, or placed in a large flat pile about two feet high while still loosely spread. Melons, squash, pumpkins or similar sprawling vines may be grown in it. For each plant dump about one-half a wheelbarrow of good soil on the top, level and sow in it, or set out plants, if the seedlings are started elsewhere. The roots of these plants like the loose run the open manure allows. In extreme dry weather the growing squash or pumpkins should be well watered. In the fall this manure has become fine in texture and makes a splendid winter's mulch for snowdrops, crocus, etc.

Do not be in a hurry about removing the winter's covering when the first warm days of spring appear. More damage is done in early spring than in settled cold weather.

It is the alternate freezing and thawing that does the most damage, and the surface water lying over the crowns of plants, which the frozen ground underneath does not allow to go down. I have seen roots of shallow-rooted plants, *Lobelia cardinalis* for instance, growing in clayey soil, lying on the surface of the ground in spring—pried out by soil expansion. Part of the covering may be removed quite early but enough should remain to shade the ground.

SUMMER MULCHING

SHALLOW-ROOTED plants like the cardinal flower (*Lobelia cardinalis*) and the tall, fall-flowering hardy phloxes, dislike the hot sun beating down on their roots. Being surface rooters, and at the same time fond of moisture, they suffer when the surface soil is dried out. They should have a summer mulch to intercept the radiation of moisture from the soil.

The spent manure I mentioned as fine for covering bulbs, is splendid for this purpose and as it is of the same color as the soil, its presence is hardly noticeable; besides it adds humus. Almost any open material may be used, that will not offend our ideas of tidiness in appearance. Grass clippings from the lawn-mower may be used.

Some plants are late in appearing above ground in the spring, *Platycodons* for

instance, and there is danger of their being dug up by impatient amateurs who have either forgotten their presence or imagined they were dead and the ground vacant. It is well, therefore, to place in the fall some cane stakes at each plant or in a row around a group of this class to indicate their presence. I also place stakes at each lily as they generally occupy open spaces between perennials, and I seldom wish to disturb them if it becomes necessary to remove one of the perennials.

With few exceptions—peonies and the gas plant, for instance—perennials need dividing and resetting every two or three years, which should be done in the early fall or early spring, but never when the soil is very wet, because in the subsequent manipulation of the soil to replenishing its food supply, it should be dry enough to break up into fine particles. The Japanese anemone should be replanted only in the spring. It is in bloom and in active

Peonies have the advantages of few enemies, long and vigorous life, beauty and, in most varieties, delightful fragrance

life in the fall. The best way to proceed is to work one section at a time—say a ten-foot strip. Cut back the foliage, take up the plants and lay them aside, covering with burlap or some material to keep the sun and wind from their roots. Then dig the bed up, deeply, and add some well-rotted manure, rake smoothly and replant. While it is probably best not to set the same plants back in the same position occupied before, it may be done, for if the soil has been well worked up it is apt to have changed its position. Then take up another section and do the same. In the meantime all large roots are divided. Some may be pulled apart, but more often they have to be cut through with a sharp spade or a butcher knife. Discard all evidence of decay and use only the healthy outer rim, possessing well-developed roots. They generally show the stalk buds for next year's growth. Three to five of these buds will make a good plant. Sometimes, in the case, perhaps, of a cherished but

not over-robust larkspur, you find part of the original root decayed, but if it has a few good roots attached to it, dust powdered sulphur on the decayed part—it often checks decay—and you may eventually restore your pet to a healthy condition.

If you want a delightful recreation and lots of fun, and would like to possess some plant producing a flower entirely new in color or form, and, certainly in your estimation finer than any your rival neighbors have ever seen, make a reserve bed in some sunny spot and raise hybrid delphiniums. In fact any one possessing a good collection of perennials should have a reserve plantation to draw from in order to fill up gaps that will be found in the main bed after any hard winter. It is especially useful for keeping up a stock of that charming but short-lived perennial, the columbine (*Aquilegia*), which seldom can be depended upon after the second year. I am speaking of the finer forms.

These hybrid delphiniums, or garden larkspur, possess the blood of two or more species and as a result are inclined to "sport," producing flowers of various forms and colors, entirely different from those of the parents. The word "sport" as used by gardeners is applied to any plant that displays a marked contrast in foliage, flower, form or habit of growth, from the type or normal aspect of the original species. The well-known golden glow is a good example, being a double form of the single-flowered *Rudbeckia laciniata*, a tall member of the Black-eyed Susan family, and known as one of the coneflowers. The flower head of the type is composed of two parts—the outer row of yellow "ray florets," which is not a part of the flower proper, except that it might be likened to the fringe that borders a curtain, and the dark brown cone in the center, which is composed of numerous minute, individual flowers like the dandelion, each perfect and capable of producing

seed. Nature is slyly freakish at times, and in this instance she changed the individual flowers into ray florets. Fortunately some observing flower lover saw this one original plant, for undoubtedly the freak occurred in one plant only, and transplanting it to his garden, eventually gave to the floral world the now common golden glow. If not noticed by some one, the plant would have lived its allotted term and died unknown to the world, for it produces no seed.

The delphinium sports into various forms of flower, color and shape—the tones of color being a mingling of blues, pinks and mauve, some in the most lovely combinations imaginable. They will all bloom the first year from seed if sown in February or March in a greenhouse or hotbed, but will not all bloom at once, so that for at least a period of one month, new blooms are opening each day. One's main pleasure is in expectancy. You are always looking and hoping for something

better, and you generally get it. It is best, when a plant does not produce a flower up to grade, to dig it up and discard it, but those that are good should be marked in some manner to identify them. A label placed at their side will do, but the better way is to get some small sheet-lead tags, bearing stamped-in numbers or letters. Attach to wire pegs ten inches long and force down near the plant, recording its number in your "Garden Book" with a description of the flower. This enables you at any planting time—spring is the best for delphiniums—to plant in groups of light blues, dark blues, etc. You may be undecided sometimes as to whether you consider a plant good enough to keep or not. In this case keep it, but mark it a "hold-over." Some plants do better the second season. They may be sown outdoors in May, but will hardly bloom the same year.

PLANT COMBINATIONS

MANY combinations may be used whereby a certain area may be made to produce a double crop of bloom, and thus prolong the flowering season within that area. Peonies, which are planted two and a half to three feet apart, may have the *Lilium superbum*, the later varieties of gladiolus, or *Hyacinth candicans* planted in between them; the last two should be taken up each fall as they are not hardy in all sections. The lilies will require resetting every few years, as they travel around in their new growth, and may invade the peony roots. These will flower above the peony foliage. Fall is the best time to plant any lily.

The shooting star (*Dodecatheon media*) may be planted between the spreading dwarf plants of that admirable bell flower

There are interesting combinations of flowers not only for succession of bloom but for simultaneous bloom, as Canterbury bells (*Campanula medium*) and foxglove (*Digitalis*)

DO NOT
CIRCULATE

(*Campanula Carpatica*). The bell flowers may be planted eighteen inches apart and, in the spring, when the shooting stars are up and in bloom, the foliage of the campanula is hardly in evidence, but during the summer it occupies all the space between them.

After flowering, all that part of the shooting star above ground turns brown, dies back and disappears to return again next spring.

The Virginia bluebell (*Mertensia Virginica*) is another charming plant of the same habit, and as it is worthy of cultivation in groups, it often becomes a question where to place it so that the bare ground it leaves behind is not an eye-sore. Besides colonies I have established in my ravine, where the overhanging underbrush hides its absence later on, I grow it under large bushes of forsythia. Both bloom at the same time and the pink buds and open blue bells of the *Mertensia*, when seen through the fleecy mass of the golden bells

of the forsythia, make a charming picture. After flowering, the forsythia hides the disrobing *Mertensia* with its heavy sheet of foliage.

Some perennials—the bleeding heart and the perennial poppy—have ragged foliage after blooming and require some tall bushy plant to be placed in front and around them to hide their shabbiness. Strong-growing perennials, asters or the biennial *Rudbeckia triloba,* are good for this purpose.

Some instances occur where a low hedge of perennials might look well, for instance in a small yard where all the lines are formal and a straight walk leads from gate to house. A floral hedge might be placed at each side of the walk by making beds eighteen inches to two feet wide and deep. The best perennial hardy plant I know for this purpose is the gas plant (*Dictamnus fraxinella*), which, when once established, remains a joy, almost forever. Some people are still enjoying the blooms of plants

set out by their great-grandmothers. This plant is slow in increasing its size, but a row planted twelve inches apart will in time make a compact hedge with a dark green, lustrous foliage, over two feet tall and fully as broad. The flower spikes are borne well above the foliage, some pink, deeply veined a darker hue, and some white. A mixture of the colors is desirable. On account of the slow habit of its increase, the bed will look scantily furnished for a few years. This can be remedied by growing at each side of the row of plants any spring-flowering bulb, or by carpeting in summer with sweet alyssum, sowing seeds in the bed. Any low-growing annual will do, but it must be low-growing or it may injure the *Fraxinella.*

WEEDING

PARADOXICAL as it may seem, the weed is the best friend the farmer has because it compels him to cultivate his land in order to exterminate the intruder. Cultivation keeps the soil open to air and moisture and conserves the latter. It is best, therefore, to go over lightly with a hoe the day after a heavy rain or a good watering.

The time to weed is before you see the weeds, but if they do appear, don't run away from them. When none are in sight, the chances are that upon microscopic examination, a velvety fuzz of green would be discovered. These are minute weed seedlings, but yet slightly rooted, and easily treated by simple dislodgment. A hot, windy day is a good time to hoe between your plants, because the wind and

sun kill the uprooted weeds in a short time. They dry up, and there is but little to remove. On a damp cloudy day if a disturbed bit—no matter how small—of the pestiferous couch grass rolls near the base of a plant and remains there, it will send down its roots among those of the plant, and it is almost impossible to get them out without taking the plant up.

LISTS OF DEPENDABLE PERENNIALS

IT is useless to attempt to name and describe all the good perennials that may be grown, but there are some that seem to do well in all sections and it may be well to call attention to some of them.

Anchusia Italica—Italian Alknet

One should grow the Dropmore variety, or possibly Perry's variety, a new form just introduced. I would not have included this plant in the list, because it does not winter well and a stock of seedling plants should be grown each year and wintered in a coldframe, did it not present such an airy, open-headed plant covered with its gentian-blue flowers for a long time. A good blue is a rare color in the garden. A group of these should be

planted about two and a half feet apart and at the rear, as they grow five to six feet in height.

Asters (hardy)

The so-called aster, grown by florists, and in general gardens, is not a true aster, but is known botanically as *Callistephus Chinensis*, introduced from China in 1731, and is a hardy annual. Why it received the common name of aster I have never been able to find out. The true aster is named from its star shape, and in England is much prized and is called the Michaelmas Daisy, because they are in full bloom at the time of the feast of St. Michael. As they grow wild nearly everywhere in the States, they are not grown so much in gardens here. All good catalogues list quite a number of good varieties for one to choose from. Being tall they should be planted at the rear.

Aconitum—Monk's-hood, Helmet Flower

This plant, the roots of which are poi-

sonous, should not be grown where children are apt to get at its roots, and when transplanted care should be taken not to allow any of its small, beet-like tubers to lie around, the surplus being burned. They grow about four feet high, blooming in the latter part of summer. *A. autumnale* and *A. Napellus* are among the best.

Anemones—Wind Flower

Anemone Pennsylvanica is a native, growing a little over a foot in height, producing in profusion fairly large white flowers in July and August. Having a "woodsy" look, it seems at home in semi-shaded positions, where it does well, but will thrive in full sun. The king of the tribe, however, is the Japanese variety, *A. Japonica,* especially the variety *Alba,* with large, showy, pure white flowers, blooming late in the fall, often after the first slight frost, and at a time when all others are gone. For this reason they should be planted where they may be seen from some

One of the brightest stars of the garden in late fall is the Japanese anemone

house window, and thus be enjoyed when it is too chilly to be out-of-doors. If planted eighteen inches apart, cup and saucer Canterbury bells may be planted in between them and removed when through blooming. The anemones do not require the room before that.

Arabis Alpina—Rock Cress

Rock cress is an early spring, white-flowering plant. Its low-growing habit makes it suitable for edging. In the fall plant *Chionodoxa Luciliæ* in between them. This is a blue-flowering bulb, hardy, cheap and in flower at the same time the rock cress is.

Aquilegia—Columbine

These have been mentioned in connection with the article on reserve beds. The Rocky Mountain columbine (*A. cærulea*), a bright blue form, is probably the handsomest one of the family, but it seldom lasts long. The golden columbine (*A.*

chrysantha) seems to be the sturdiest of the group and lasts several years. It belongs to the long-spurred class, all of which are good.

Bocconia cordata—Plume Poppy

The plume poppy is a stately plant, attaining a height of seven to eight feet, bearing in July and August terminal panicles of creamy white flowers having large, indented glaucous foliage. It has one fault, however; it spreads rapidly and soon takes possession of the whole bed, and therefore should be in an individual hole of its own. The plantings are sometimes made in large bottomless tubs, sunk in the ground.

Campanula—Bell Flower

Nearly all of this family, as well as the allied *Platycodons*, are good. They are slender, upright growers, as a rule, but *C. Carpatica*, already mentioned in the text, grows but eight inches tall. The

species *macrantha persicifolia, rotundifolia* (Blue Bells of Scotland) and *Trachelium,* are the most reliable among the group. The cup-and-saucer, and the chimney bell flower, are biennials, blooming but once, and have to be wintered the year prior in a coldframe.

Centaureas—Hard-heads

Like an open sunny position. *C. macrocephala* is the best, bearing thistle-like golden yellow flowers.

Coreopsis

The species *lanceolata,* and *C. grandiflora,* have rich golden flowers of pleasing form, splendid for cutting. They grow about two feet high and bloom all summer if not allowed to go to seed, but seldom last over the third year.

Delphiniums

Have already been discussed. All the named varieties are good, especially Belladonna. See page 26.

Dictamnus—Gas Plant

Fully described on page 32.

Digitalis—Foxglove

The form usually grown is treated as a biennial, and with me, must be coldframed the first year. *Ambigua* or *grandiflora* is a perennial having pleasing pale yellow flowers, and is a comparatively long-lived plant.

Echinops—Globe Thistle

This is a tall, interesting plant with foliage somewhat like a thistle. *E. Ritro* is the best. Its peculiar flower head consists of a ball about an inch and a half in diameter, from which spring, in close array all over the ball, minute flowers of a deep metallic blue.

Eryngium—Sea Holly

A plant somewhat similar in appearance to the *Echinops,* but smaller in all its

parts. *E. amethystinum* is the best, having small globular flower heads of an amethystine blue color, this color also extending quite a way down the flower stems.

Eupatorium—Thoroughwort

Two forms are in the market—*E. ageratoides*, bearing numerous small white flowers in late summer, and *E. cœlestinum*, with light blue flowers similar to the ageratum. Both are good.

Funkia—Plantain Lily—Broad-leaf Day Lily

I consider *F. subcordata grandiflora* the best of this group. In time a single plant, if not crowded, will make a mound of green foliage, looking as if an inverted bushel basket were shingled with broad overlapping foliage, above which, in August, spring pure white, sweet-scented lily-like flowers. It will stand partial shade. If planted in groups they should be placed

two and a half to three feet apart. Tulips may be planted between them.

Gaillardia—Blanket Flower

The perennial forms produce much handsomer flowers than do the annuals. All of our garden perennial forms, including *grandiflora*, are varieties of *G. aristata*, and, being natives of Texas, are not always hardy in the Northern States. —See page 4 in the text. It is a rather sprawling plant, growing naturally some two feet high, and hard to stake, but may be pegged down. Use common long hairpins. It requires an open situation in full sun, and thrives best in a sandy soil, well drained.

Geum—Avens

Quite a hardy border plant, rather low in its foliage, but throwing its flower stems up fully eighteen inches, blooming more or less all summer. *G. coccineum*, with scar-

let flowers, and *G. Hederichi*, are both good.

Hesperis matronalis—Rocket

An admirable plant for use where most other plants would fail. It does fairly well in semi-shady places, at base of shrubs and in between them in open spots. Plants grow three to four feet tall, of bushy form when treated well, bearing pinkish flowers in June and July. There is a white form.

Hemerocalis—Yellow Day Lily

All are good, strong growers with narrow iris-like foliage, producing flowers in tones of yellow. *H. flava*, the sweet-scented, deep lemon-yellow-flowered form, is the best and must not be confounded with the coarser-flowered *H. fulva*, the tawny day lily.

Hibiscus—Mallow

All the mallows are good, from the "crimson eye" to the new mallow mar-

vels, moderately late, upright-growing and hardy. The colors run from pure white to pinks and reds.

Inula ensifolia

A low-growing very hardy plant bearing freely yellow daisy-like flowers, always presenting a neat appearance.

Hollyhocks

On account of the prevailing hollyhock disease—a disease of the foliage hard to combat—it is best to grow one-year-old plants, as they are less affected than the older ones. The singles are the most charming.

Iris—Fleur-de-lis

This is a large group, from the bulbous Spanish and English iris, which bloom in June and then die down to reappear next season, and may therefore be planted in open spaces between other plants, to the

The tall-growing hardy phlox (*Phlox paniculata*) is a garden mainstay through August, September and October. Beware of the magenta colorings

magnificent Japanese iris, *I. Kæmpferi.* This latter one is somewhat fickle and does not last long. The best for general planting are the German, *cristata, pumilla* and *Sibirica* varieties. *Pallida Dalmatica* is exceedingly fine.

Lysimachia clethroides—Loose-strife

An excellent plant in damp soils.

Pæonia—Peony

Every one should have them, including the early-flowering red *P. officinalis,* and the later ones. Try a few tree peonies—*P. Moutan.* They are grafted on the ordinary form, so destroy all suckers that come from below the union.

Phlox

The tall-growing hardy phlox should be in all gardens. It is permanent if taken up every three years and divided. Strong "cutting" plants give the finest blooms. Avoid magenta colors. The new salmon-

pink Elizabeth Campbell is fine; on light soils, well drained, the creeping forms are desirable.

Pyrethrum

The hybrids of *P. roseum* have handsome, daisy-like flowers in white and various shades of pink, up to red, in single and semi-double forms, but they seldom live long. A raised bed suits them best. *P. uliginosum,* the giant white daisy, is fine in damp situations.

Rudbeckia

This genus includes the well-known golden glow and *R. nitida* var. Autumn Sun, growing five feet high. It bears attractive primrose yellow flowers. The giant purple coneflower, often classed as a rudbeckia, is really an *Echinacea,* growing three or more feet tall, bearing reddish purple flowers and is very attractive in groups bordering a woods or shrubbery

belt, presenting a rustic aspect and remaining a long time in bloom.

Thalictrum—Meadow Rue

The white form of *T. aquilegifolium* is a very handsome plant, doing fairly well in open shade, flowering in fluffy masses of white.

Veronica—Speedwell

These are all good, but *V. longifolia subsessilis* is by far the finest of the taller growers, reaching a height of three feet, and bearing long slender spikes of deep blue flowers.

SOME OF THE BEST PLANTS FOR SHADY POSITIONS

Aconitum—Monk's-hood
Actæa spicata—Baneberry
Amsonia
Anemone Pennsylvanica—Wind Flower
Convallaria—Lily-of-the-valley

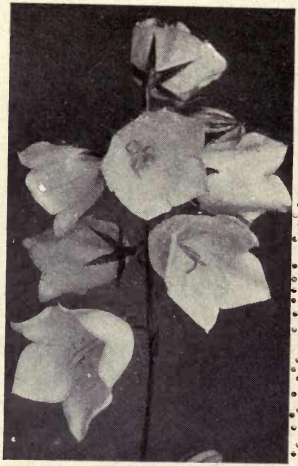
Dielytra—Bleeding-heart
Ferns
Funkia—Plantain Lily
Hepaticas—Liver Leaf
Thalictrum—Meadow Rue
Trillium—Wake Robin
Mertensia Virginica—Virginia Blue Bells

FOR DRY SOILS

Asclepias tuberosa—Butterfly Weed
Aquilegia Canadensis—Canadian Columbine
Aquilegia alpina—Alpine Columbine
Gypsophila paniculata—Baby's Breath
Gaillardia—Blanket Flower
Geranium sanguineum—Cranes-bill
Helianthus multiflorus, fl. pl.—Double Mexican Sunflower
Inula grandiflora—Flea Bane
Inula ensifolia
Saxifraga crassifolia
Sedums—Stonecrop
Tunica saxifraga

Crimson-eye hibiscus or swamp mallow, blooming in August and September

Gaillardias are at their best in the perennial form and thrive in a sandy soil



Campanula persicifolia, one of the best varieties in the bell flower family

FOR WET SOILS

Hibiscus Moscheutos—Swamp Mallow, and all Mallows
Iris pseudacorus
" *Sibirica*—Siberian Iris
" *lævigata*—Japanese Iris
" *prismatica*
Lilium superbum—Turk's-cap Lily
Lobelia cardinalis—Cardinal Flower
Monarda—Bergamot—in variety, Rose
Lythrum Salicaria—Loose-strife
Lysimachia clethroides—Loose-strife
Polygonum cuspidatum—Giant Knot-weed
Spiræa—dwarf herbaceous form in variety

ALPINES, OR ROCK PLANTS

Achillea tomontosa—Wooly Yarrow
Arabis albida—Rock Cress
Campanula Carpatica—Carpathian Hare-bell
Coronilla varia—Crown Vetch
Geum coccineum—Avens

Gypsophila repens—Baby's Breath
Inula ensifolia—Flea Bane
Phlox amœna, in variety—Creeping Phlox
Sedum, in variety—Stonecrop
Tunica saxifraga
Veronica circœoides—Speedwell
Yucca filamentosa—Adam's Needle

THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

AN INITIAL FINE OF 25 CENTS
WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
WILL INCREASE TO 50 CENTS ON THE FOURTH
DAY AND TO $1.00 ON THE SEVENTH DAY
OVERDUE.

OCT 31 1933
NOV 1 1933
OCT 24 1934
DEC 29 1937
OCT 18 1938
APR 25 1939
AUG 4 1941
MAR 14 1947

YA 06164

E44989
Fowl